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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,239	07/10/2003	Masahiro Ohgami	A35901 074224.0114	2852
21003	7590	05/13/2005	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			YEE, DEBORAH	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 05/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/617,239

Applicant(s)

MASAHIRO OHGAMI ET AL

Examiner

Deborah Yee

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4 to 7,9 to 12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 4 to 6 is/are allowed.
- 6) ☒ Claim(s) 7,9 to 12, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 9-165644 in view of Okada et al (US Patent 5,948,183).

3. JP'644 discloses specific bainitic-ferritic steel alloy examples in Tables 1 and 2 on page 4 which meet the claimed composition except fails to include B as an alloying constituent. It is, however, well known in the metallurgical art as evident by Okada on lines 40 to 49 in column 5 that adding small amounts of B at 0.0002 to 0.10% in an analogous low-yield ratio steel will enhance toughness and strength. Since these properties are desired and sought by JP'644, then it would be an obvious modification and a matter of routine optimization for one of ordinary skill in the art to add B to the JP'644 alloy to produce no more than the known and expected effect of such an addition.

4. Even though JP'644 does not teach ferrite having a grain size of at least 20 microns and 1 to 15vol% bainite as recited by the claims, such would be expected since composition and property limitations are closely met. See Table 2 on page 4 of JP'644 has yield ratio, tensile and yield strength values similar to those achieved by the present invention on Table 3 on page 23 of applicant's specification.

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5. Claims 7, 9 to 12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 10265844 in view of Okada et al (US Patent 5,948,183).

6. JP'844 discloses specific bainitic-ferritic and martensitic-ferritic steel alloy examples in Table 4 on page 6 which meet the claimed composition except fails to include B and N as alloying constituents. It is, however, well known in the metallurgical art as evident by Okada on lines 40 to 60 in column 5 that adding small amounts of B at 0.0002 to 0.10% and N at 0.01% or less in an analogous low-yield ratio steel will enhance toughness and strength, and increase yield ratio, respectively. Since these properties are desired and sought by JP'644, then it would be an obvious modification and a matter of routine optimization for one of ordinary skill in the art to add B and N to the JP'644 alloy to produce no more than the known and expected effect of such an addition.

7. Even though J'644 does not teach ferrite having a grain size of at least 20 microns and 1 to 15vol% bainite or martensite as recited by the claims, such would be expected since composition and property limitations are closely met. See Table 5 on page 7 of JP'844 has yield ratio, tensile and yield strength values similar to those achieved by the present invention in Tables 3 to 6 of applicant's specification.

***Response to Arguments***

8. Applicant's arguments filed 3-07-05 have been fully considered but they are not persuasive. It was submitted that that JP'644 or JP'844 does not teach N or B as alloying constituents and ferrite grain size of at least 20 microns with 1 to 15 vol% bainite or martensite. In response to these arguments, refer to 103 rejections stated above.

9. It was submitted that prior art does not teach using a specific chemical composition and microstructure to minimize the yield ratio, caused by cold working a steel pipe. It is the examiner's position that JP alloys closely meet the claimed composition, and also exhibit low yield ratios, and tensile and yield strengths similar to those taught by the present invention. To distinguish claims over prior art, applicant will need to demonstrate (e.g. by comparative test data) that the prior art alloys do not possess ferrite grain size of at least 20 microns with 1 to 15 vol% bainite or martensite. Also applicant's comparative test in Tables 3 to 6 would be invalid because applicant's comparative examples are not representative of the prior art alloys. Note the minimum requirement for comparative test data is with the closest prior art example.

***Allowable Subject Matter***

10. Claims 1,2 and 4 to 6 are allowed.

11. The following is an examiner's statement of reasons for allowance: The art of record does not teach or fairly suggest a steel pipe having a low yield ratio,

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characterized by a composition, as claimed, wherein the steel pipe microstructure is composed of ferrite and at least one of pearlite and cementite and wherein an average size of grains of the ferrite is at least 25 microns and an average size of grains of one of the pearlite and the cementite is 4 to 20 microns. Criticality of the composition and microstructural limitations are established in Tables 1 and 2 of applicant's specification. As demonstrated by the test data, applicant has discovered that by using a specific chemical composition and microstructure, the yield ratio caused by cold working a steel pipe can be minimized.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

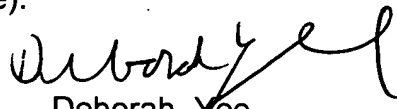
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

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